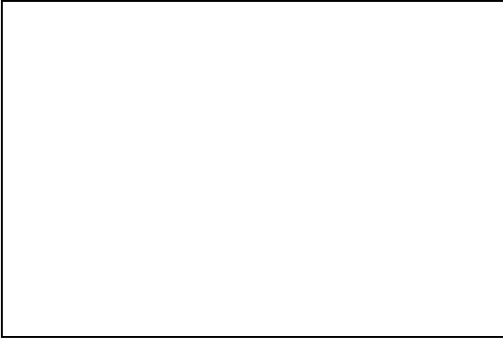


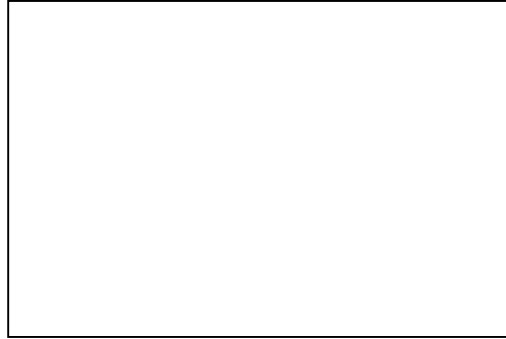
6-5: Properties of Logarithms

Another In-Class Activity?! Open your books to page 397, pair up, and let's work through another one! Record your answers below.

1. a. Record your graph here.



b. And another here.



c. And your conjecture is...

2. a. Another graph?



b. This better be the last graph.



c. Another conjecture.

3.

Logarithm of 1:

Logarithm of a Product:

Logarithm of a Quotient:

Logarithm of a Power:

Example 1: Simplify without a calculator.

a. $\log_6 2 + \log_6 3$

b. $\log_5 200 - \log_5 8$

c. $\log 85 - \log 17 + \frac{1}{2} \log 400$

Example 2: Rewrite without logarithms.

a. $\ln x = \frac{1}{3} \ln a$

b. $\log x = \log a - 4 \log b$

Example 3: Write an equation without exponents equivalent to the exponential equation $A = Pe^{rt}$.

Example 4: Which number is larger, 400^{500} or 500^{400} ?

Homework:

"Education's purpose is to replace an empty mind with an open one." - Malcolm Forbes